



Task Plan Overview

Inertial Metrology

The below is a simplified description of a Zupt inertial metrology task plan. The purpose is to describe how we derive all of the values needed for the metrology report.

The General Visual Inspection (GVI) is conducted prior to metrology operations and can be performed while the CTD dip is completed.

The C-PINS sensor is aligned at Hub A through a sequence of 90° rotations.

Attitude measurements are performed at Hub A and Hub B to collect the heading, pitch and roll of the hubs.

Position loops are then performed between Hub A and B by flying C-PINS from Hub A to Hub B, and then back to Hub A after a fix is taken at Hub B.

Bathymetric data is collected for the route survey, the hub to mudline readings, and the hub-to-hub depth differences using a Paroscientific Digiquartz.

The metrology tasks and descriptions are summarized in the table below:

Task	Purpose	Equipment
GVI	Confirm structure identifications	ROV Camera
CTD Dip via ROV or crane	Density of water column for absolute depth determination	CTD Probe
INS Alignment	Alignment of the INS at Hub A to being metrology.	C-PINS
Attitude measurements: Hub A and Hub B	To derive heading, pitch, and roll values of the hubs in order to report the attitude / inclination of the metrology hubs.	C-PINS
Position Loops between Hub A and Hub B	Collect the horizontal range data between the hubs. Collect the vertical depth difference of the hubs as a check against the Digiquartz	C-PINS
Jumper route bathymetry	To collect data needed for the profile of the seabed between Hub A and Hub B	C-PINS Digiquartz Pressure Sensor
Step Heights (Hub to Mudline)	Collect the hub to seabed height differences for Hub A and Hub B to establish the vertical drop from hub to mudline at each	Digiquartz Pressure Sensor
Hub to Hub Height Difference	Collect hub height difference data using the Digiquartz pressure sensor	Digiquartz Pressure Sensor